"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9

USSR

MUZLOV, D. P. and TARAN, Yu. A., Priborostroyeniye, No 2, 1972, pp 77-79

of their formula for finding the mathematical expectation of error in the gyrocompass, the authors use the "Amur" type of gyrocompass under orbital motion of the center of gravity of a ship in a swell. They are associated with the Ryazan Radio Engineering Institute.

2/2

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9

USSR

UDC: 531.383

MUZLOV, D. P. and FEDOROV, V. P.

"Behavioral Peculiarities of a Combination Hydrostatic Gyrocompass Suspension Under Vibration Conditions"

Leningrad, Priborostroyeniye, No 5, 1972, pp 68-72

Abstract: Errors in the "Amur" type of gyrocompass on a mobile base are functions of the suspension system's dynamic properties. An element in the system is the mercury cushion maintaining the gyrosphere inside the follow-up sphere. This paper offers the results of an investigation of the motion of the cushion under single-direction horizontal vibrations, where experimentation showed marked nonlinearities in the cushion's motion in the fundamental resonance region. An analysis is given of the cushion's behavior by a method based on the introduction of nonlinearities into the conditions of the motion of a fluid mechanical analog rather than the conditions of the hydrodynamic problem; the mechanical analog of a solid spherical segment is chosen. The equations of motion of the segment are stated and solutions for them are found. It is shown that in the region of fundamental resonance, oscillations of the cushion may develop in the plane perpendicular to that of the

1/2

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9

USSR

MUZLOV, D. P. and FEDOROV, V. P., Priborostroyeniye, No 5, 1972, pp 68-72

disturbance, and that such oscillations may result in azimuth errors of the "Amur." The authors are associated with the Ryazan Polytechnical Institute.

2/2

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9

MUZLOV, D.P.

Gyroscopes

55435
JPRS
04 May 1972

USSR

UDC 531.383

INFLUENCE OF THE MERCURY CUSHION IN THE CONTAINED HYDROSTATIC SUPPORT ON GYROCOMPASS ACCURACY UNDER IRREGULAR ROLLING CONDITIONS

(Grossmass)

[Article by D. P. Muzlov and Yu. A. Turaev, Leningrad, Priborostroyeniye, Russian, Vol 15, No 2, 1972, pp 77-79]

Effect of the mercury cushion of a gyrocompass (GC) of the "Anschutz" type on the accuracy of its indications upon random rolling of its base is examined. It is shown that incomplete mutual correlation of the mercury cushion perturbations during rolling causes the appearance of a supplementary compass error.

The question of the hydrostatic support effect on the behavior of gyro devices is examined in a number of publications [1], [2], [3]. Thus it is shown in [3] that a hydrostatic support practically does not introduce any errors in the GC indications. GC's analogous in construction and parameters but with combined hydrostatic supports (a liquid support with centering coils and mercury cushion) have less accuracy. This permits the assumption that the contact between the surface of the sensor (S) and the mercury cushion is one of the reasons for the appearance of a supplementary error in a GC with a combined hydrostatic support.

In order to examine the dynamics of the mercury cushion, we shall make use of the results of [4], where it was shown analytically that with a small depth of heavy liquid oscillating in a spherical cavity, its sufficiently good mechanical analog is a rigid spherical pendulum. Experimental investigations also confirmed the legitimacy of such a substitution in the frequency range from zero to the natural frequency of oscillations of the mercury cushion, approximately equal to 10 sec^{-1}. Proposing in the following to limit ourselves to the investigation of small oscillations of the mercury cushion

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9

USSR

MUZRABEKOV, Sh. M., NADZHIMUTDINOV, K. N., and KAMILOV, I. K., Tashkent Medical Institute

"Effect of Tetramethylthiuram Disulfide (TMTD) on the Action of Some Drugs"

Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 11, 1972, pp 8-11

Abstract: TMTD, a pesticide used to treat cotton seeds, grains, etc., was found to potentiate the effect of the hypnotic hexobarbital and that of the convulsant pentylenetetrazol in rats. TMTD injected intraperitoneally at doses ranging from 1/20 to 13 LD_{50} after the administration of hexobarbital increased the duration of the animals' sleep by 65%. At the larger dose the effect persisted 5 days. At doses of 150 and 120 LD_{50} TMTD injected intraperitoneally into rats given pentylenetetrazol intensified the convulsions by 25 and 75%, respectively. Prolonged injection of low doses of the pesticide had a wavelike effect, the peak occurring after the first month. Both hexobarbital and pentylenetetrazol are known to be metabolized in the liver. The intensification of their effects under the influence of TMTD is attributed to the inhibitory action of the pesticide on microsome metabolism in the liver.

1/1

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9

1/2 020 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--KINETICS OF HOMOGENEOUS BUTADIENE POLYMERIZATION CATALYZED BY TITANIUM CHLORIDE IODIDE,TRIISOBUTYLALUMINUM -U-

AUTHOR-(04)-BRESLER, L.S., GRECHANOVSKIY, V.A., MUZSAY, A., PODDUBNYI, I.YA.

COUNTRY OF INFO--USSR

SOURCE--MAKROMOL. CHEM. 1970, 133, 111-18

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL REACTION MECHANISM, CHEMICAL REACTION KINETICS, BUTADIENE, MOLECULAR WEIGHT, IODINE, ORGANOALUMINUM COMPOUND, TITANIUM CHLORIDE, POLYMERIZATION CATALYST

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1615 STEP NO--SZ/0000/70/133/000/0111/0118

CIRC ACCESSION NO--AP0112609

UNCLASSIFIED

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9

2/2 020 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0112609

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. KINETICS OF HOMOGENEOUS BUTADIENE POLYMN. INITIATED BY TII SUB2 CL SUB2 ISO;BU SUB3 AL WAS STUDIED AT CONST. MONOMER CONCN. A REACTION MECHANISM INVOLVING FAST INITIATION AND PROPAGATION OF LIVING CHAINS WITH REVERSIBLE DEACTIVATION OF THE ACTIVE SITES WAS PROPOSED. THE NO. AND WE. AV. MOL. WTS. OF THE POLYMER AT ANY MOMENT AFTER ESTABLISHING THE DEACTIVATION REACTIVATION EQUIL. WERE CALCD. FACILITY: SYN. RUBBER RES. INST., LENINGRAD, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9

USSR

UDC 621.311.1.16.072.85

MUZYCHENKO, A. D.

"Balanced Operating Conditions of Star-Connected Resistances Connected to an Asymmetrical Multiphase Voltage System"

V sb. Probl. tekhn. elektrodinamiki (Problems of Technical Electrodynamics -- collection of works), vyp. 24, Kiev, Naukova Dumka Press, 1970, pp 75-78 (from RZh-Elektrotekhnika i Energetika, No 4, Apr 71, Abstract No 4 Ye241)

Translation: The problem of balancing the operating conditions of the asymmetrical feed network arises when studying balancing and stabilizing devices. In such devices, the chokes and capacitor banks are star-connected with a single-phase load. Expressions are presented for special cases of feeding the three-prong star from an asymmetrical three-phase voltage system. There are 5 illustrations and a 6-entry bibliography. [Institute of Electrodynamics of the Ukrainian SSR Academy of Sciences, Kiev]

1/1

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9

USSR

UDC: 621.357.7

BOGOSLOVSKIY, V. V., TYUTINA, K. M., MUZYCHENKO, L. A., KUDRYAVTSEV, N. T.

"Optimization of the Process of Electrodeposition of Nickel-Antimony Alloy"

Moscow, Zashchita Metallov, Vol 9, No 3, Jul-Aug 73, pp 455-456.

Abstract: An experimental-statistical method is used to construct a mathematical model of the process of electrodeposition of shiney nickel-antimony alloy deposits with minimum internal stress. The optimization parameters selected were the diffuse-scattered light intensity and the internal stresses in the alloy, expressed in ocular microscope divisions. The experimental data, following statistical checking, were used to produce two equations to calculate the conditions of deposition of the nickel-antimony deposits with minimum internal stresses: $NiCl_2 \cdot 6H_2O$ 59 g/l; SbF_3 3 g/l; NH_4Cl 21 g/l; NH_4F 41 g/l; D_c = 0.5-6 a/dm^2; pH 4.5; temperature 70°; antimony anodes.

1/1

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9

USSR

UDC 771.537.61

PRUSS, P. Kh., Candidate of Sciences, MATSIYEVICH, L. V., IVANOV, A. M., MODEL', N. M., MEZYCHENKOV, M. S., and SKACHKOVA, Ye. V.

"The Interference Resolvometer 'LIR-1'"

Leningrad, Optiko-Mekhanicheskaya Promyshlennost', No 9, Sep 72, pp 30-34

Abstract: The technical characteristics, operating principle, and design of the first industrial sample of a displayed automatic device, the laser interference resolvometer LIR-1, are described by reference to its optical schema and photographs of the control desk and principal blocks. The resolvometer was developed according to the technical assignment of the State Optical Institute by the Krasnogorsk Mechanical Plant for the determination of resolutions of photographic materials in the 440--2960 mm^{-1} range. A laser of the LG-36A type (λ =6328 Å) is used as light source. The LIR-1 is a two-beam interferometer in which interference bands with sinusoidal distribution of brightness develop by interaction of two flat waves. It is designed for operation under laboratory conditions. Visual or diffraction methods can be used for the evaluation of exposed and processed resolvograms. Tests of a series of high-resolution photofilms yielded a value of the resolving ability which can be characterized as $R > 2700\ mm^{-1}$, because all frequency groups up to the limiting, were reproduced. Values of R for high-resolution films are presented. Four illustr., one table, twelve biblio. refs.

1/1

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9

USSR UDC 619:616-093

MUZYCHIN, S. I.

"Toxigenic Properties of Cl. perfringens Type A Variant in Mixed Cultures with E. Coli."

Minsk, Izvestiya Akademii Nauk BSSR, Seriya Sel'skokhozyaystvennykh Nauk, No 4, 1970, pp 118-121

Abstract: Studies of enterotoxemia of calves, showed that in most cases E. coli is isolated along with Cl. perfringens, type A. Therefore, the effect of different strains of E. coli on the toxigenic properties and growth of Cl. perfringens type A was investigated. Cl. perfringens and E. coli strains obtained from calves sick or dying from enterotoxemia were used in the study, along with type seropathogenic strains of E. coli kept in the division museum. In investigating the effect of E. coli and its vital products on growth and toxin formation of Cl. perfringens in vitro and in mice, these results were obtained. The seropathogenic E. coli strains used in the experiments (No 055, 026, 09, and the local unstandardized strain No 117 and their vital products had no substantial effect on the growth and toxin formation of Cl. perfringens type A. Study of the effecy on rabbits of Cl. perfringens type A toxin obtained in cultures grown together with E.

1/2

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9

USSR

MUZYCHIN, S. I., Izvestiya Akademii Nauk BSSR, Seriya Sel'skokhozyaystvennykh Nauk, No 4, 1970, pp 118-121

coli also revealed data confirming the conclusion that E. coli strains used in the experiment have no effect on the toxigenic properties of Cl. perfringens type A.

2/2

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9

USSR

KORSUNSKIY, M. I.; GENKIN, Ya. Ye.; MUZYCHUK, R. V.

"Multiple Character of the Spectra of the Characteristic Electron Energy Loss in Transition Metals of the Yttrium-Palladium Series"

Alma-Ata, Izvestiya Akademii Nauk Kazakhskoy SSR: Seriya Fiziko-Matematicheskaya; November-December, 1972; pp 6-13

ABSTRACT: The shapes of the spectra of the characteristic electron energy losses during reflection from large samples of metals of the yttrium-palladium series were determined. The calculations were made on the assumption that the most probable types of characteristic electron energy loss in the kilovolt range are one type of energy loss by surface excitation and three by internal excitation. The parameters of the first inelastic peaks of all four types of characteristic electron energy loss for which the calculated spectra agree satisfactorily with the experimental ones were determined.

The energy losses at the surface of a sample are related to the excitation of surface plasmons. The first and second types of internal losses are related to the excitations of the plasma of the collective electrons and collective excitations of the locally bound electrons respectively. The question of the authenticity and nature of the third type of internal loss is discussed.

The article includes two figures and two tables. There are 16 references.

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9

USSR UDC: 681.3

MUZYCHUK, V. T., YAREMENKO, V. V.

"Circuit Realization of Operators in the Specialized Language TEKHNOL"

V sb. Sredstva tekhn. kibernet. (Facilities of Technical Cybernetics--collection of works), Kiev, "Tekhnika", 1970, pp 3-13 (from RZh-Kibernetika, No 9, Sep 71, Abstract No 9V547)

Translation: The authors consider the operations in a machine language for a special computer designed to solve problems of technological design. Taking the example of tabular operations as a basis, the authors consider the problem of structural realization of the operations through the method of formal synthesis of an automaton according to a microprogram. On the basis of the resultant microprogram, the functions of the outputs and the functions of the excitation are determined and used in designing the functional circuit of the automaton. V. Mikheyev.

1/1

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9"

"APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9

USSR UDC: 681.3.06:51

MUZYCHUK, V. T.

"On the Problem of Programming Automation in Automated Technological Design"

V sb. Sredstva tekhn. kibernet. (Facilities of Technical Cybernetics--collection of works), Kiev, "Tekhnika", 1970, pp 26-30 (from RZh-Kibernetika, No 9, Sep 71, Abstract No 9V587)

Translation: The author considers possible methods of translation from the specialized language TEKHNOL. The method of indirect translation using the TA-2 translator is selected as economically advantageous, and also from the standpoint of enabling rapid introduction of this newly developed specialized algorithmic language. The fundamental operators of the TEKHNOL language are described as procedures in the translator input language. V. Mikheyev.

1/1

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202130002-9"